

WHAT IS CLAIMED IS:

1. A negative electrode active material prepared by subjecting to a mechanical milling treatment an alloy powder containing at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Tl.

2. A negative electrode active material as set forth in claim 1, wherein said alloy powder further comprises at least one element selected from the transition elements belonging to the fourth period.

3. A negative electrode active material as set forth in claim 1, wherein said alloy powder is prepared by melting liquefying at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Tl by heating.

4. A negative electrode active material as set forth in claim 3, wherein said alloy powder is prepared by a gas atomizing method.

5. A negative electrode active material prepared by subjecting a raw material comprising a powder containing at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Tl to a mechanical alloying treatment at a reaction temperature of below

90 °C.

6. A negative electrode active material as set forth in claim 5, wherein said raw material further comprises a powder containing at least one element selected from the transition elements belonging to the fourth period.

7. A negative electrode active material as set forth in claim 5, wherein oxygen concentration is not more than 1% by weight.

8. A negative electrode active material as set forth in claim 5, wherein the reaction temperature during said mechanical alloying treatment is below 85 °C.

9. A method of producing a negative electrode active material which comprises subjecting to a mechanical milling treatment an alloy powder containing at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Tl.

10. A method of producing a negative electrode active material as set forth in claim 9, wherein said alloy powder further comprises at least one element selected from the transition elements belonging to the fourth period.

11. A method of producing a negative electrode

active material as set forth in claim 9, wherein said mechanical milling treatment is carried out by use of a ball mill.

12. A method of producing a negative electrode active material as set forth in claim 9, wherein said mechanical milling treatment is carried out by use of an attritor.

13. A method of producing a negative electrode active material as set forth in claim 9, wherein said alloy powder is prepared by melting and liquefying at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Ti by heating.

14. A method of producing a negative electrode active substance as set forth in claim 13, wherein said alloy powder is prepared by a gas atomizing method.

15. A method of producing a negative electrode active material which comprises subjecting a raw material comprising a powder containing at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Ti to a mechanical alloying treatment at a reaction temperature of below 90 °C.

16. A method of producing a negative electrode

active material as set forth in claim 15, wherein said raw material further comprises a powder containing at least one element selected from the transition elements belonging to the fourth period.

17. A method of producing a negative electrode active material as set forth in claim 15, wherein the reaction temperature during said mechanical alloying treatment is below 85 °C.

18. A nonaqueous electrolyte cell comprising a negative electrode comprising a negative electrode active material, a positive electrode, and a nonaqueous electrolyte, wherein

said negative electrode active material is prepared by subjecting to a mechanical milling treatment an alloy powder containing at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Tl.

19. A nonaqueous electrolyte cell as set forth in claim 18, wherein said alloy powder further comprises at least one element selected from the transition elements belonging to the fourth period.

20. A nonaqueous electrolyte cell as set forth in claim 18, wherein said alloy powder is prepared by melting and liquefying at least one element selected from

the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Tl by heating.

21. A nonaqueous electrolyte cell as set forth in claim 20, wherein said alloy powder is prepared by a gas atomizing method.

22. A nonaqueous electrolyte cell as set forth in claim 18, wherein said positive electrode comprises a lithium compound as a positive electrode active material.

23. A nonaqueous electrolyte cell as set forth in claim 18, which is a secondary cell.

24. A nonaqueous electrolyte cell comprising a negative electrode comprising a negative electrode active material, a positive electrode, and a nonaqueous electrolyte, wherein

    said negative electrode active material is prepared by subjecting a raw material comprising a powder containing at least one element selected from the group consisting of the Group 14 elements exclusive of C and the Group 13 elements exclusive of Tl to a mechanical alloying treatment at a reaction temperature of below 90 °C.

,25. A nonaqueous electrolyte cell as set forth in claim 24, wherein said raw material further comprises a powder containing at least one element selected from the

transition elements belonging to the fourth period.

26. A nonaqueous electrolyte cell as set forth in claim 24, wherein said negative electrode active material has an oxygen concentration of not more than 1% by weight.

27. A nonaqueous electrolyte cell as set forth in claim 24, wherein the reaction temperature during said mechanical alloying treatment is below 85 °C.

28. A nonaqueous electrolyte cell as set forth in claim 24, wherein said positive electrode comprises a lithium compound as a positive electrode active material.

29. A nonaqueous electrolyte cell as set forth in claim 24, which is a secondary cell.